

### ABSTRACT OF THE DISCLOSURE

A multi-layer gas sensor element is described which comprises a solid electrolytic member, a substrate, and a porous member, wherein each of the substrate and the porous member has a thickness larger than that of the solid electrolytic member with respect to a lamination direction; the substrate and the porous member face each other and sandwich the solid electrolytic member; a ceramic component constituting the substrate in the highest volume percent is the same as the ceramic component constituting the porous member in the highest volume percent thereof; and the volume percent (R2) of the ceramic component contained in the porous member is 80% or more the volume percent (R1) of the ceramic component contained in the substrate.